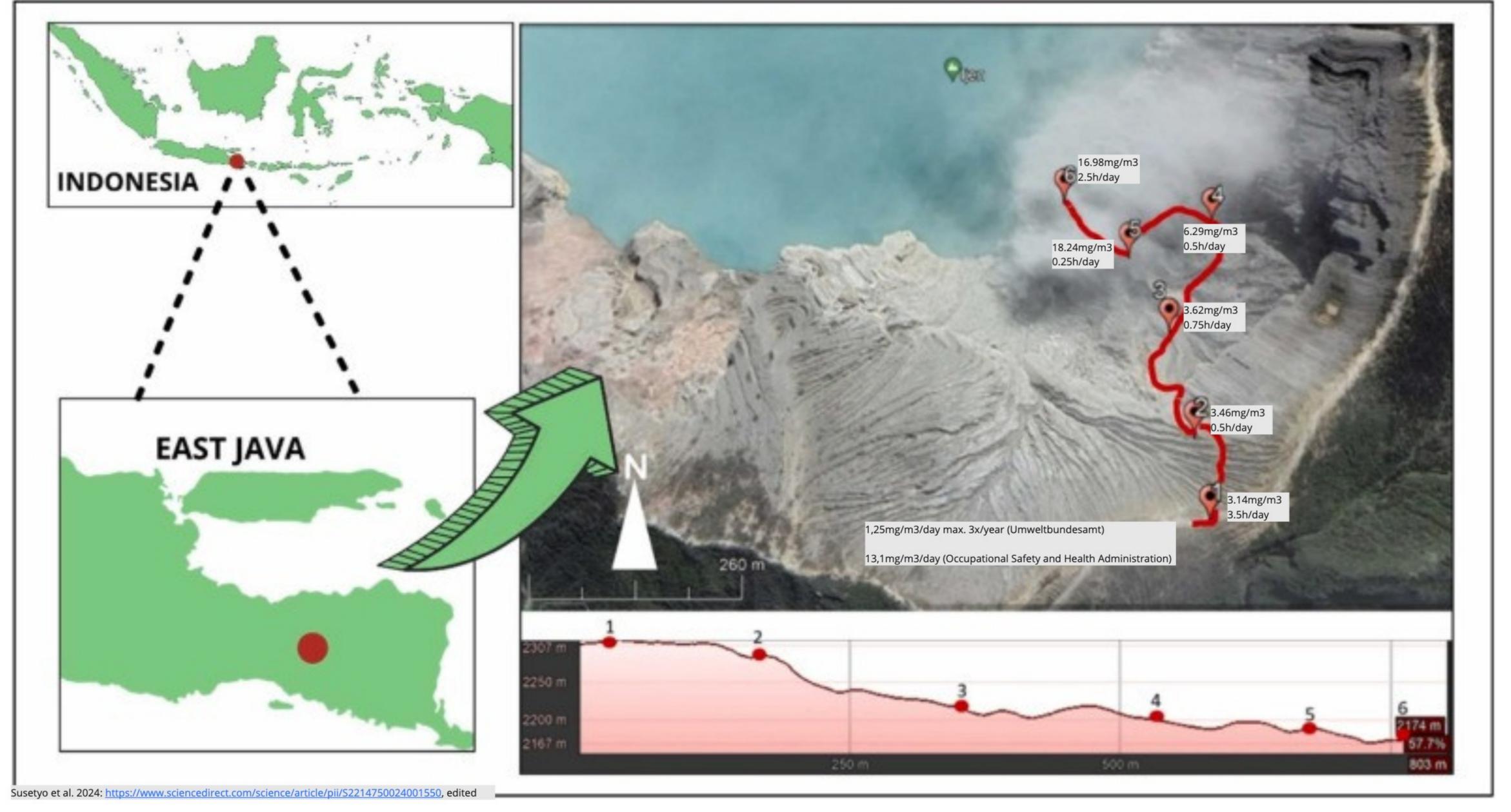




SULFUR MINING AT KAWAH IJEN



HEALTH HAZARDS AND EFFECTS

Most acidic lake in the world —> 0,5pH = battery acid

Sulfurdioxide (SO2) & Hydrogen sulfide

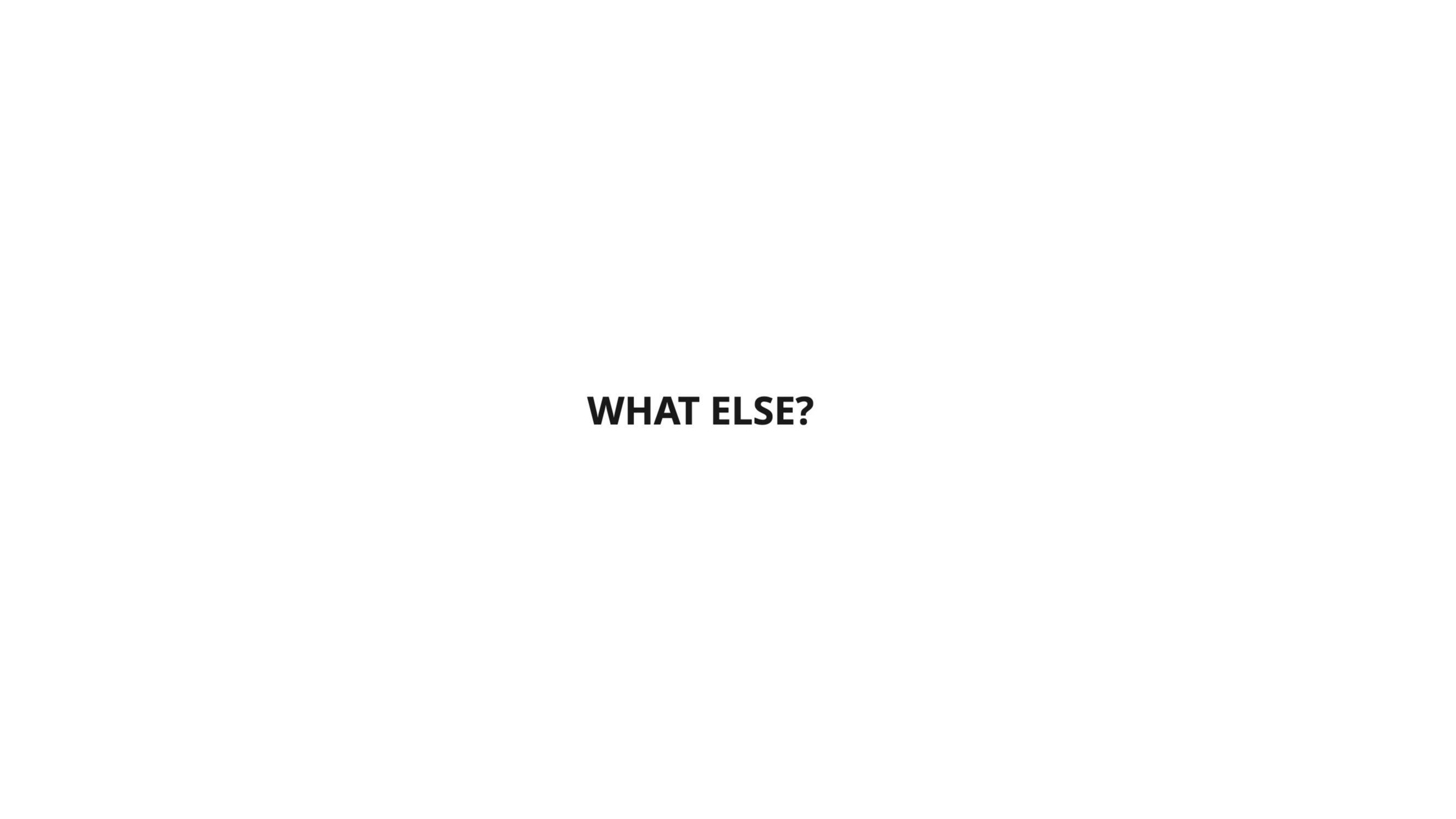
Dangerous terrain & labour

<u>Immediate/Short-term</u>:

- 100% eye irritation&coughing
- 67% shortness of breath&headaches
- 60% skin irritation and stomach cramps
- Broken bones (often legs/feet), organ failure, dissolved teeth
- Injuries or death from rockfall

<u>Long-term:</u>

- Life expectancy 50 years (68 in Indonesia for males)
- Chronic respiratory illness
- Lung corrosion
- Teeth corrosion
- Increased susceptibility to respiratory infections and eye problems
- Deformed spines
- Bent legs







"The incredible blue flame phenomenon, caused by sulfurrich gases, is a rare natural wonder. You can also see the hard work of the sulfur miners against the backdrop of the volcanic landscape. They give you a glimpse into a unique way of life."

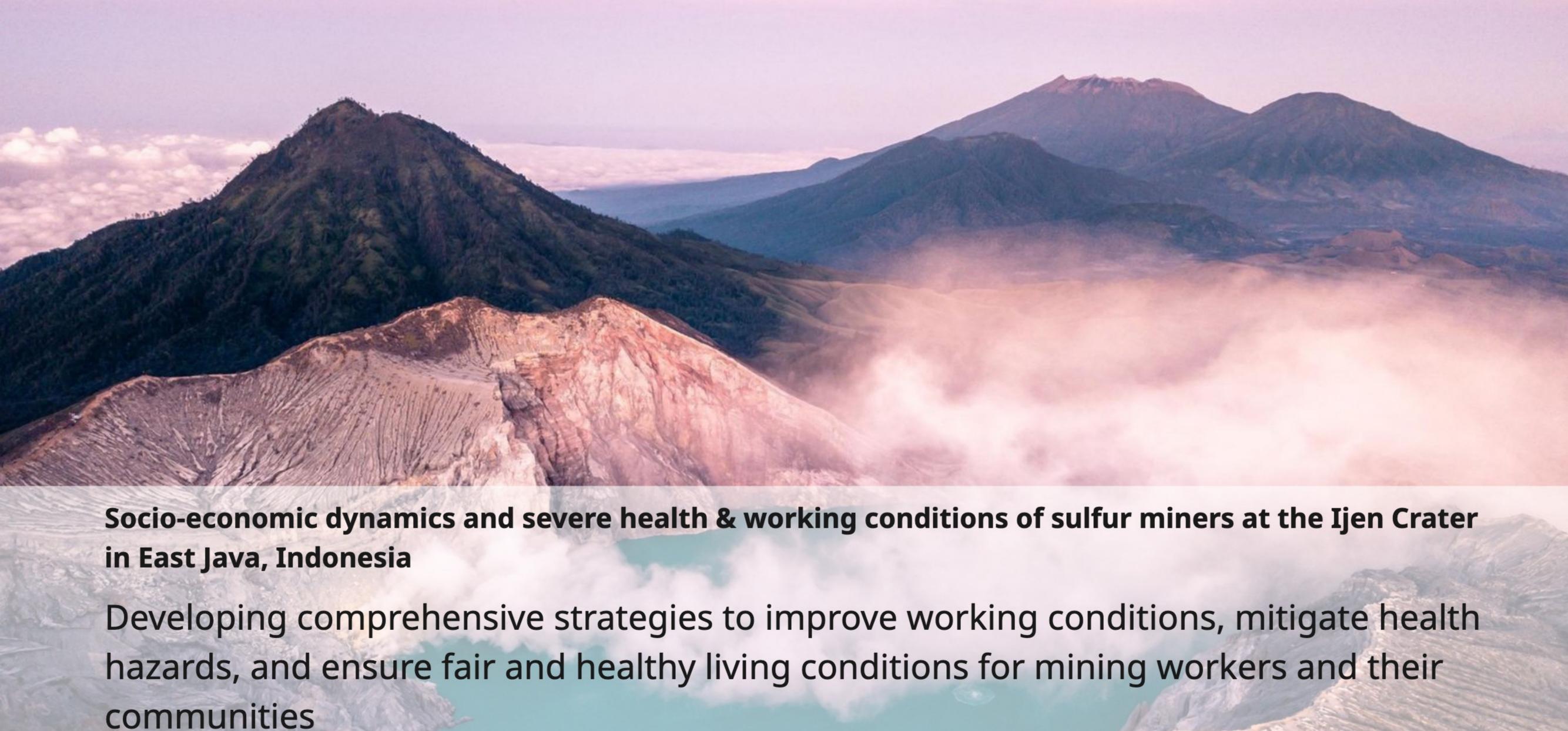
PT Bali Java Holidays (2024)

TOURISM

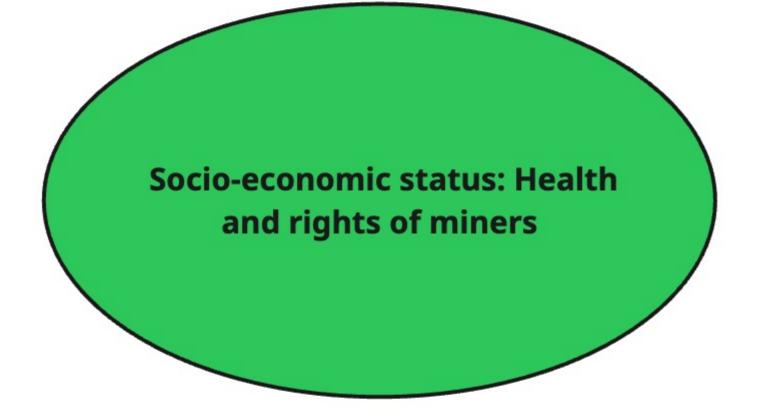
"Therefore, the ongoing mining operation contributes to the unique appeal of Ijen Crater as a natural tourism destination. The unusual sight of miners extracting sulfur adds a distinctive, albeit potentially concerning from a safety perspective, element to the tourist experience."

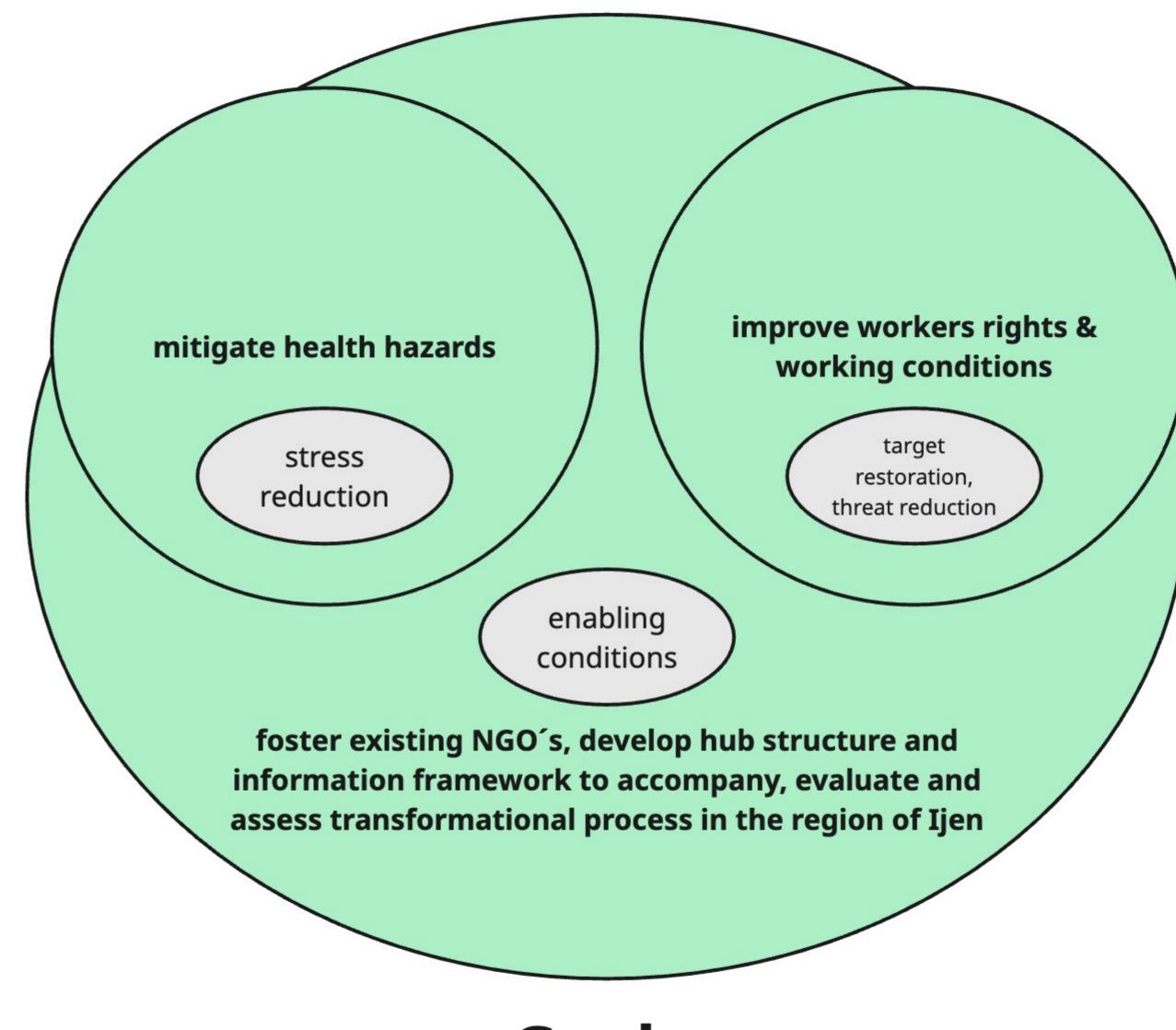
Zen, M. H., & Wulandari, D. (2016)





GOALS AND TARGET SYSTEMS





Target

Goals

Goal 1

By 2035, severe respiratory, organ & skin related health problems of mining workers have decreased by 70% while life expectancy has increased by at least 3 years

Goal 2

By 2050, 60% of workers will have long-term financial perspectives

Goal 3

After one year, regulatory structures have been developed to facilitate analysis of regional context and manage data of stakeholder communication

SDG 3 Increase Health & Wellbeing

SDG 1 No Poverty

SDG 4 Quality Education

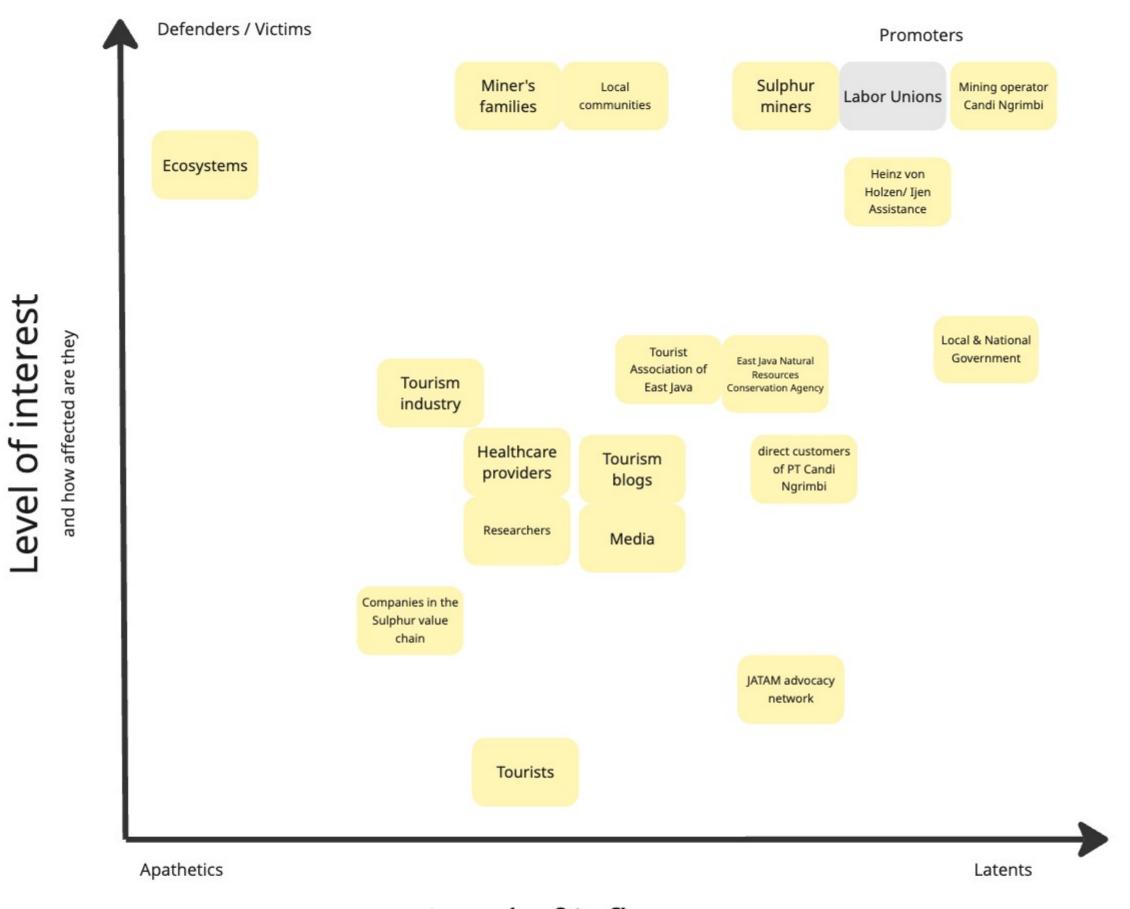
SDG 8 Decent work and economic growth

SDG 3 Increase Health & Wellbeing

SDG 8 Decent work and economic growth

SDG 9 Industry, Innovation and Infrastructure

Stakeholder analysis



Interest here means one or both of two things: (1) that the individual, organization, or group is interested intellectually or philosophically in the effort; and/or (2) she or it is affected by it. The level of interest, in this second sense, corresponds to how great the effect is. (University of Kansas 2024)

Stakeholders

Potential Stakeholders

Potential Partners

Universitas Airlangga (UNAIR)

Location: Surabaya, East Java

Overview: UNAIR is renowned for its health and medical programs, though it also offers degrees in a variety of disciplines including law, social sciences, economics, and natural sciences.

Kyoto University

Both involved in Toxocology report

Level of influence

Jatam mining advocacy network Legend:

The Mining Advocacy Network is a network of non-governmental organizations and community organizations concerned with human rights, gender, environment, indigenous peoples and social justice in the mining and oil and gas industry. JATAM activities aim to realize the right to life of Indonesian people in a healthy, productive, happy and sustainable environment.

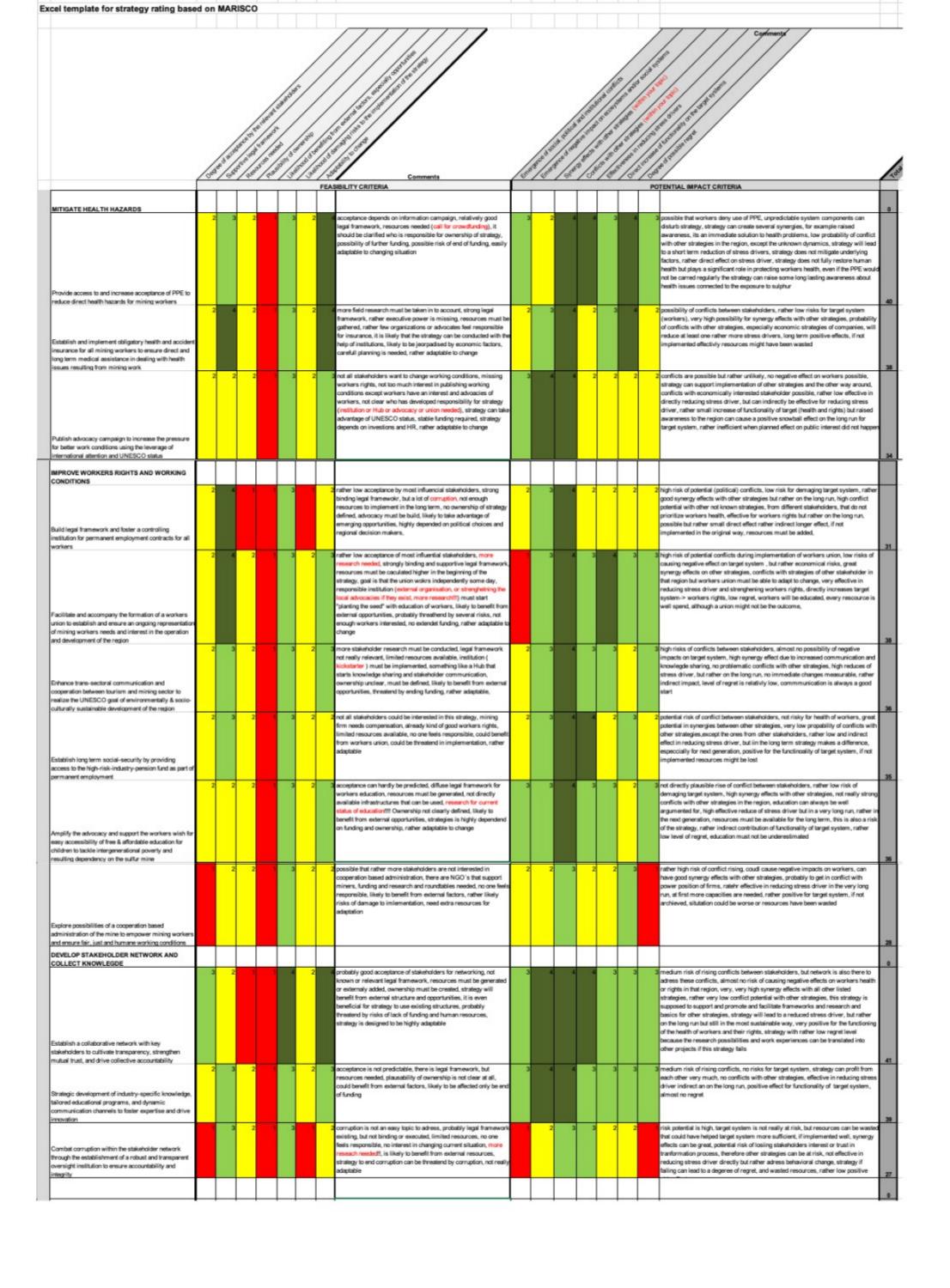
WHO ARE THE STAKEHOLDERS?



HEALTH RIGHTS KNOWLEDGE Establish long term Establish a collaborative network social-security by with key stakeholders to cultivate providing access to the transparency, strengthen mutual high-risk-industrytrust, and drive collective pension fund as part of accountability permanent employment Publish advocacy campaign to increase the Provide access to and Amplify the advocacy and support the workers wish for increase acceptance of pressure for better work possible strategies easy accessibility of free & PPE to reduce direct conditions using the and infrastructure of affordable education for children health hazards for leverage of international to tackle intergenerational Jatam NGO mining workers attention and UNESCO poverty and resulting dependency on the sulfur mine status Establish and implement obligatory health and accident insurance for all mining workers Strategic development of Facilitate and accompany the industry-specific knowledge, to ensure direct and long term formation of a workers union to establish and ensure an ongoing tailored educational programs, medical assistance in dealing and dynamic communication with health issues resulting from representation of mining workers channels to foster expertise and needs and interest in the mining work operation and development of drive innovation the region Build legal framework Enhance trans-sectoral and foster a communication and cooperation Strategies of Heinz controlling institution between tourism and mining sector to realize the UNESCO goal von Holzen with Ijen for permanent of environmentally & socio-Assistance employment contracts culturally sustainable development of the region and for all workers diversity economic opportunities Explore possibilities of a Combat corruption within the stakeholder network through the cooperation based administration of the mine to establishment of a robust and transparent oversight institution empower mining workers and ensure fair, just and humane to ensure accountability and working conditions integrity Strategies of Natural Create subsidiary scheme with Park Ijen tourism sector to ensure direct inclusion and benefit from the

mining workers role in positive tourism development

FEASIBILITY ASSESSMENT AND POTENTIAL IMPACT



Plausibility of ownership Synergy effects with other strategies MITIGATE HEALTH HAZARDS Provide access to and increase acceptance of PPE to reduce direct health hazards for mining workers Establish and implement obligatory health and accident insurance for all mining workers to ensure direct and long term medical assistance in dealing with health issues resulting from mining work Publish advocacy campaign to increase the pressure for better work conditions using the leverage of international attention and UNESCO IMPROVE WORKERS RIGHTS AND WORKING CONDITIONS Build legal framework and foster a controlling institution for permanent employment contracts for all workers Facilitate and accompany the formation of a workers union to establish and ensure an ongoing There is a need to strengthen advocacy and existing representation of mining workers needs and interest in the operation and development of the institutional structures to establish a comprehensive Enhance trans-sectoral communication and organization that consolidates knowledge, conducts cooperation between tourism and mining sector to realize the UNESCO goal of environmentally & research, unites stakeholders, advocates for workers' socio-culturally sustainable development of the rights, serves as a central hub for the region's Establish long term social-security by providing access to the high-risk-industry-pension fund as part of permanent employment transformational process, and takes ownership of Amplify the advocacy and support the workers wish for easy accessibility of free & affordable responsibility for strategic initiatives. education for children to tackle intergenerational poverty and resulting dependency on the sulfur Explore possibilities of a cooperation based administration of the mine to empower mining workers and ensure fair, just and humane working conditions DEVELOP STAKEHOLDER NETWORK AND COLLECT KNOWLEGDE Establish a collaborative network with key stakeholders to cultivate transparency, strengthen mutual trust, and drive collective accountability **Enhancing advocacy** Strategic development of industry-specific knowledge, tailored educational programs, and dynamic communication channels to foster network as key strategy expertise and drive innovation Combat corruption within the stakeholder network through the establishment of a robust and transparent oversight institution to ensure accountability and integrity

Provide access to and increase acceptance of PPE to reduce direct health hazards for mining workers

Establish and implement
obligatory health and accident
insurance for all mining workers
to ensure direct and long term
medical assistance in dealing
with health issues resulting from
mining work

(11)

Publish advocacy
campaign to increase the
pressure for better work
conditions using the
leverage of international
attention and UNESCO
status

12)

Build legal framework and foster a controlling institution for permanent employment contracts for all workers

10)

Establish long term social-security by providing access to the high-risk-industrypension fund as part of permanent employment



Facilitate and accompany the formation of a workers union to establish and ensure an ongoing representation of mining workers needs and interest in the operation and development of the region



Explore possibilities of a cooperation based administration of the mine to empower mining workers and ensure fair, just and humane working conditions



number of leverage point by Donella Meadows

Amplify the advocacy and support the workers wish for easy accessibility of free & affordable education for children to tackle intergenerational poverty and resulting dependency on the sulfur mine



Enhance trans-sectoral
communication and cooperation
between tourism and mining
sector to realize the UNESCO goal
of environmentally & socioculturally sustainable
development of the region and
diversity economic opportunities



Create subsidiary scheme with tourism sector to ensure direct inclusion and benefit from the mining workers role in positive tourism development



Establish a collaborative network with key stakeholders to cultivate transparency, strengthen mutual trust, and drive collective accountability



Strategic development of industry-specific knowledge, tailored educational programs, and dynamic communication channels to foster expertise and drive innovation



Combat corruption within the stakeholder network through the establishment of a robust and transparent oversight institution to ensure accountability and integrity

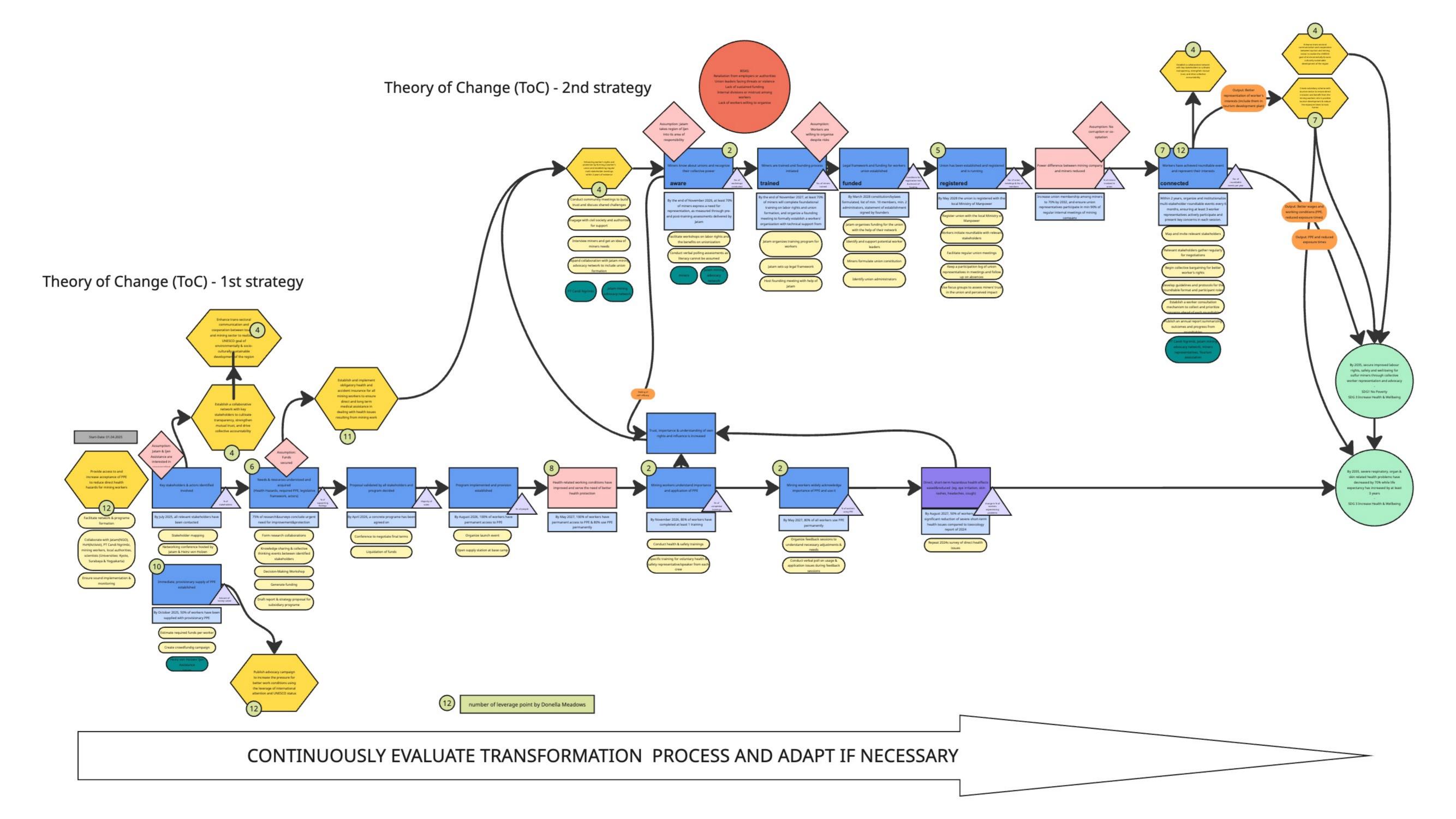


possible strategies and infrastructure of Jatam NGO

Strategies of Heinz von Holzen with Ijen Assistance

Strategies of Natural Park Ijen





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